

## BUILDING ENGINEERING REPORT (BER)

Building Name: Federal Building – 517 Gold Avenue SW  
Building No.: NM0024ZZ  
Location: Albuquerque, New Mexico

Number: 460.2C – Plumbing

Title: Practical Upgrade of Plumbing System  
Replace Flush Valves, Faucets, Install Handicap Fixtures

### DETAILED COST ESTIMATE

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Removal of Existing	1	LOT	\$35,815	\$35,815
Water Closets – Handicap	18	EA	\$851	\$15,318
Flush Valves	101	EA	\$120	\$12,120
Carrier	18	EA	\$375	\$6,750
Urinals – Handicapped	9	EA	\$700	\$6,300
Flush Valves	26	EA	\$120	\$3,120
Carrier	9	EA	\$320	\$2,880
Faucets	52	EA	\$120	\$6,240
Lavatories – Handicapped	18	EA	\$750	\$13,500
Faucets	18	EA	\$230	\$4,140
Carrier	18	EA	\$320	\$5,760
EWCS – Handicapped	9	EA	\$1,170	\$10,530
EWC Carriers	9	EA	\$320	\$2,880
Subtotal				\$125,353
Mark-Up – 15% Contingency				\$18,803
Mark-Up – 18% Overhead and Profit				\$22,564
N.M. Gross Receipts Tax at 5.8125%				\$7,286
Total E.C.C.				\$174,006
Total E.C.C. (rounded)				\$174,000

## BUILDING ENGINEERING REPORT (BER)

Building Name: Federal Building - 517 Gold Avenue SW  
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Location: Albuquerque, New Mexico

WORK ITEM: Action required within 5 years X Action required within 5-20 years   

Number: 460.3 - Plumbing

Title: Upgrade of Sewage Ejectors and Sump Pumps

Cost: FY 94: \$208,000 FY 98: \$283,000

### DESCRIPTION:

The existing building consists of a number of duplex sump pumps and one pneumatic sewage ejector. The pneumatic sewage ejector is located in the basement of the building and provides for removal of sewage from all of the basement area toilet rooms and drains. This ejector was installed when the building was constructed in the early 1960's and therefore is due for replacement. The sump pumps are also the same age of the building and are all of the vertical motor extended shaft type sump pumps. This work item includes replacement of all the existing sump pumps in the building and the two main sewage ejectors located in the basement. This work item also includes local piping around the existing sumps and sewage ejectors, including the vents through the roof of the building.

### JUSTIFICATION:

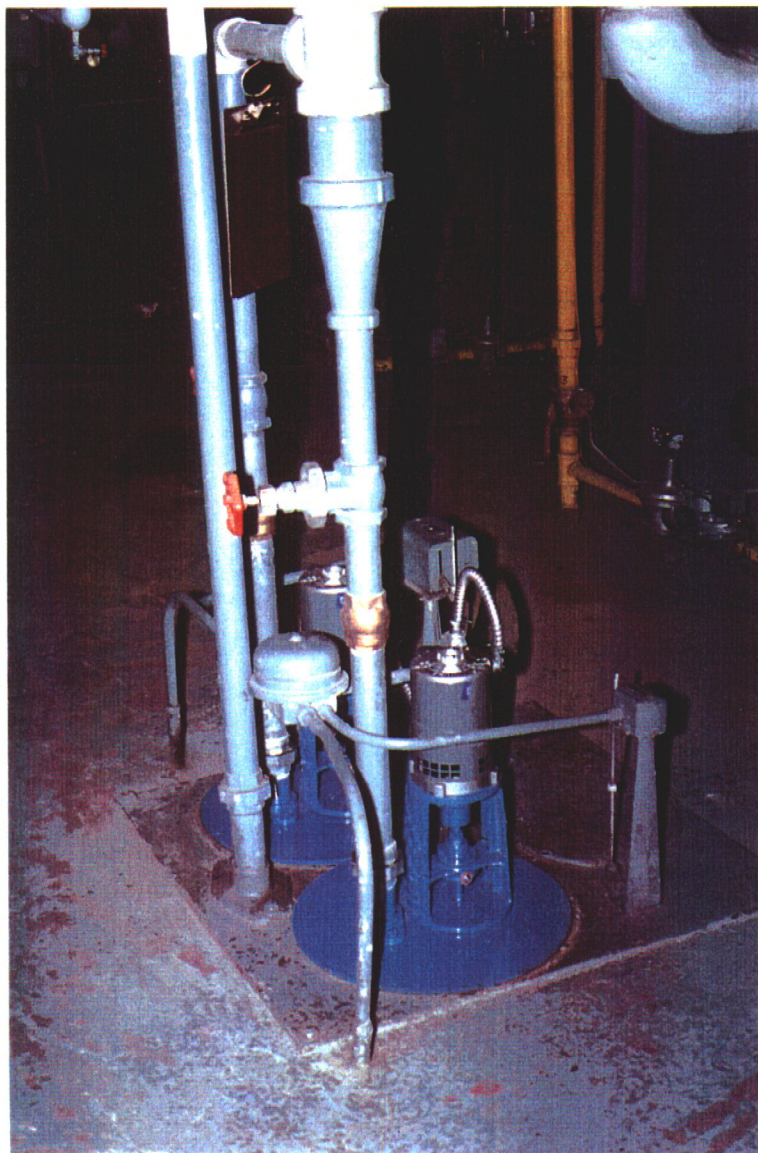
These items of equipment have a wide range of age, up to 35 years, when the building was first constructed. Some of the sump pumps in the building are in various stages of disarray and non-operational. The sewage ejectors are a major component of the building waste system and were installed at the time the building was built.

### ASSOCIATED WORK ITEMS:

There are no Associated Work Items.

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Sump Pump

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Building No.: NM0024ZZ

Location: Albuquerque, New Mexico

Number: 460.3 – Plumbing

Title: Practical Upgrade of Sewage Ejectors and Sump Pumps

### DETAILED COST ESTIMATE

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Removal of Existing	1	LOT	\$42,720	\$42,720
Sump Pumps	4	EA	\$3,500	\$14,000
Sewage Ejectors	2	EA	\$6,500	\$13,000
Galv Steel Piping	100	LF	\$20	\$2,000
Air Compressor	(30.5)	(M)		
	1	EA	\$2,500	\$2,500
Sewer/Vent Pipe and FTG – 4"	800	LF	\$20	\$16,000
	(243.8)	(M)		
Sewer/Vent Pipe and FTG – 3"	800	LF	\$18	\$14,400
	(243.8)	(M)		
Sewer/Vent Pipe and FTG – 2"	800	LF	\$16	\$12,800
	(243.8)	(M)		
Sewer/Vent Pipe and FTG – 1–1/2"	1000	LF	\$14	\$14,000
	(304.8)	(M)		
Sewer/Vent Pipe and FTG – 1–1/4"	1500	LF	\$11	\$16,500
	(457.2)	(M)		
Gate Valves	8	EA	\$200	\$1,600

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Building Name: Federal Building - 517 Gold Avenue SW  
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Location: Albuquerque, New Mexico

WORK ITEM: Action required within 5 years X Action required within 5-20 years \_\_\_\_

Number: 460.4 - Plumbing

Title: New Restroom Finishes and Accessories (18)

Cost: FY 94: \$326,000 FY 98: \$444,000

### DESCRIPTION:

The existing restrooms (9 men/9 women) are in original condition with slight handicapped accessible modifications. The finishes, toilet partitions and accessories are showing wear and age in addition to increased maintenance expenses. A complete removal of existing finishes, fixtures, partitions and equipment is eventually needed to provide for the next 35 years of service. Complete renovation would also allow for full compliance with the handicapped accessibility requirements.

### JUSTIFICATION:

Complete restroom renovation provides a new products which improves appearance and performance and requires less maintenance. The complete renovation brings the restrooms into total compliance with handicapped accessibility requirements.

### ASSOCIATED WORK ITEMS:

Refer to Work Item 460.2 upgrade of plumbing system.

Refer to Work Item 616.2 modify restroom vestibules.



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Building Name: Federal Building - 517 Gold Avenue SW  
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Title: New Restroom Finishes and Accessories (18)



Typical Restroom Condition

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Number: 460.4 – Plumbing

Title: New Restroom Finishes and Accessories (18)

### DETAILED COST ESTIMATE

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
Demolition	4900	SF	\$6	\$29,400
Floor/Wall/Ceiling with Utilities per SF Floor Area	(455.2)	(SM)		
New Construction				
Wall and Finishes (CT)	12200	SF	\$6.50	\$79,300
	(1,133.4)	(SM)		
Door/Frame/Hardware Reinstallation	36	EA	\$200	\$7,200
Floor Finish (CT)	4900	SF	\$6.50	\$31,850
	(455.2)	(SM)		
Ceiling Finish	4900	SF	\$2.25	\$11,025
	(455.2)	(SM)		
Partitions at Stalls	90	EA	\$400	\$36,000
Restroom Accessories	18	EA	\$1,850	\$33,300
Paint/Patch/Trim		LS		\$3,600
Mechanical				\$0
Electrical				\$0
Subtotal				\$231,675
Mark-Up – 15% Contingency				\$34,751
Mark-Up – 18% Overhead and Profit				\$41,702
N.M. Gross Receipts Tax at 5.8125%				\$17,909
Total E.C.C.				\$326,037
Total E.C.C. (rounded)				\$326,000

## BUILDING ENGINEERING REPORT (BER)

Building Name: Federal Building - 517 Gold Avenue SW  
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Location: Albuquerque, New Mexico

WORK ITEM: Action required within 5 years X      Action required within 5-20 years   

Number: 469.1 - Energy Conservation

Title: Retrofit Existing Building Lighting (Exclusive of 6th Floor)

Cost: FY 94: \$64,000      FY 98: \$87,000

### DESCRIPTION:

Lighting throughout the building is fluorescent, 2' x 4', parabolic light fixtures in the offices and prismatic, 2' x 2', light fixtures in the corridors, with the exception of the sixth floor which has pendant mounted, 1' x 4', fluorescent light fixtures in the offices. Exit lighting is provided by exit light fixtures that have been retrofitted with 2 long-life lamps.

The light fixtures were installed prior to recent major technological advances in ballasts and lamps which provide much more energy-efficient lighting.

This work item was designed, but was put on hold. The 6th floor lights are addressed in WI 410.3.

It is recommended that the existing lighting in the basement, first floor thru fifth floor and seventh floor thru eighth floor be retrofitted to include energy-efficient, high frequency, electronic ballasts and T-8 lamps.

### JUSTIFICATION:

This work item has already been identified and designed as a legitimate and necessary project. However this item was put on hold pending re-evaluation. No changes in this work are proposed.

The electrical energy consumption savings for upgrading to the electronic ballasts and T-8 lamps would be 40%. Additionally, energy consumption for cooling the building would be reduced, due to the reduced heat load produced by the retrofitted light fixtures.



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Number: 469.1 - Energy Conservation

Eye strain of tenants, due to the flickering effect caused by the 60Hz operation of conventional fluorescent lighting, would be reduced by the use of high frequency (20kHz+) electronic ballasts.

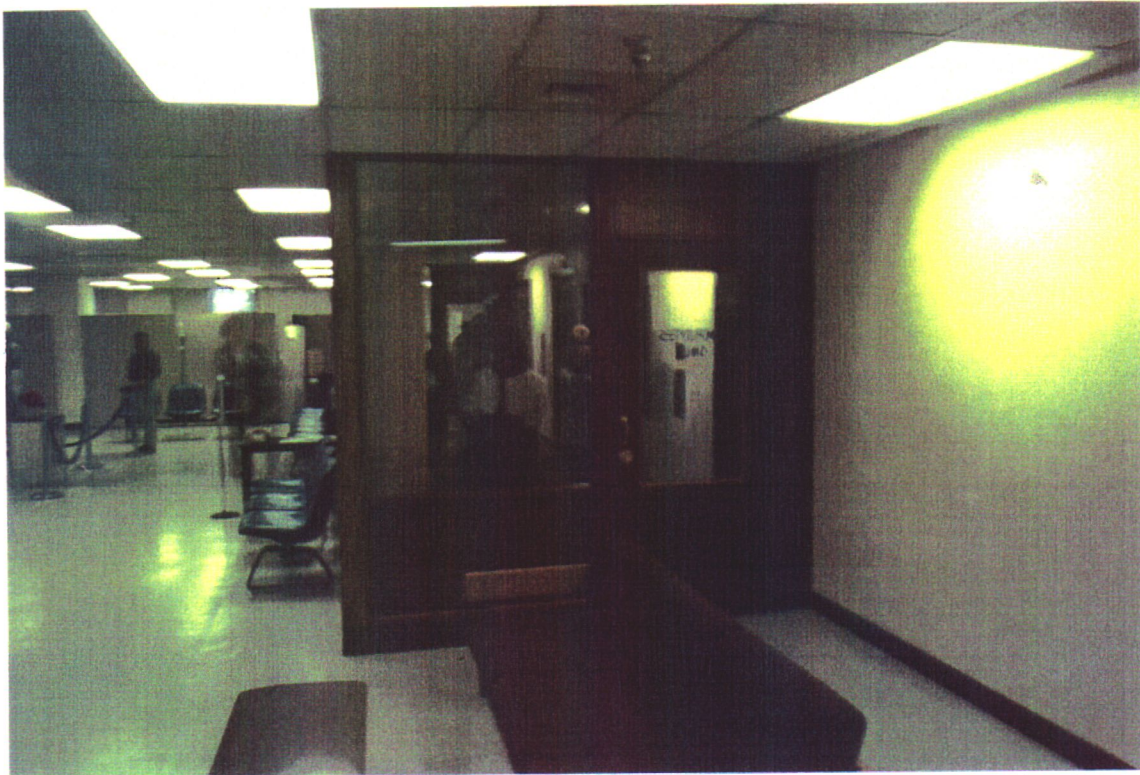
Harmonics in the lighting branch circuiting would be reduced due to the lower total harmonic distortion produced by electronic ballasts. This would improve the overall power quality of the electrical distribution system.

### ASSOCIATED WORK ITEMS:

Replace lighting on sixth floor, Work Item No. 410.3.

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Number: 469.1 Energy Conservation  
Title: Retrofit Existing Building Lighting (Exclusive of 6th Floor)



Typical Existing Lighting